

PROJECT DESCRIPTION

- I. GENERAL
THIS PROJECT INVOLVES INSTALLATION OF APS/CPS PEDESTRIAN EQUIPMENT ON THE NORTH, SOUTH, AND WEST LEGS OF THE INTERSECTION OF MD 28 (KEY WEST AVENUE) AT OMEGA DRIVE AND MEDICAL CENTER DRIVE IN MONTGOMERY COUNTY. MD 28 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.
- II. INTERSECTION OPERATION
THIS INTERSECTION OPERATES IN A NEMA SIX-PHASE SEMI-TRAFFIC-ACTUATED MODE. THERE ARE EXCLUSIVE LEFT-TURN PHASES FOR EASTBOUND AND WESTBOUND MD 28. THE OMEGA DRIVE AND MEDICAL CENTER DRIVE APPROACHES OPERATE CONCURRENTLY. AN ALTERNATE PEDESTRIAN PHASE ACROSS THE WEST LEG OF THE INTERSECTION IS PROVIDED. CONCURRENT PEDESTRIAN PHASES ARE PROVIDED ON THE NORTH AND SOUTH LEGS.
- III. PEDESTRIAN OPERATION
NAVIGATOR AUDIBLE PEDESTRIAN PUSHBUTTONS TO CROSS THE NORTH, SOUTH, AND WEST LEGS OF THE INTERSECTION ARE TO BE PROVIDED. WHEN THE PEDESTRIAN LOCATES AND PASSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE:

NORTH: "WAIT TO CROSS OMEGA AT KEY WEST, WAIT."
SOUTH: "WAIT TO CROSS MEDICAL CENTER AT KEY WEST, WAIT."
WEST: "WAIT TO CROSS KEY WEST AT OMEGA/MEDICAL CENTER, WAIT."

WHEN THE WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTACT PERSONS

THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

DISTRICT 3	OFFICE OF TRAFFIC AND SAFETY
MS. ANYESHA MOOKHERJEE (MO) ASSISTANT DISTRICT ENGINEER - TRAFFIC 301-513-7404/301-513-7358	MS. CORREN JOHNSON CHIEF, TRAFFIC OPERATIONS 410-787-7630
MR. VICTOR GRAFTON DISTRICT ENGINEER - UTILITIES 301-513-7350	MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS 410-787-7630
MR. DUANE BERNARD ASSISTANT DISTRICT ENGINEER - CONSTRUCTION 301-513-7385	MR. ED RODENHIZER CHIEF SIGNAL OPERATIONS 410-787-7650
MR. THOMAS FOUNTAIN ASSISTANT DISTRICT ENGINEER - MAINTENANCE 301-513-7304	MR. EUGENE BAILEY CHIEF SIGN OPERATIONS 410-787-7670
MONTGOMERY COUNTY	MR. MIKE STOCKER SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE) 410-787-7668
MR. ROBERT RICKETTS TECHNICAL CENTER SUPERVISOR PHONE NUMBER 240-876-3681	
MR. KAMAL HAMUD MONTGOMERY COUNTY-TRAFFIC ENGINEERING PHONE NUMBER 301-777-8761	

MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING
STANDARD PLATES FOR TRAFFIC CONTROL: MD 104.03-11, MD 104.04-13 THROUGH MD 104.04-16.

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION			
ITEM NO.	QUANTITY	UNIT	DESCRIPTION
900000	52	SF	SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN M1-5(6) (36"x72"), 2 EA. 36 SF M1-5(6) (24"x48"), 2 EA. 16 SF
900000	66	SF	SHEET ALUMINUM GROUND MOUNTED SIGN W11-2 (36"x36"), 6 EA. 54 SF W16-7p(L) (24"x12"), 3 EA. 6 SF W16-7p(R) (24"x12"), 3 EA. 6 SF

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR			
ITEM NO.	QUANTITY	UNIT	DESCRIPTION
100000	1	EA	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
201032	40	CY	CLASS 2 EXCAVATION
203030	3	CY	TEST PIT EXCAVATION
500000	600	LF	10 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585617	160	LF	5 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585621	1690	LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	10	LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	1630	LF	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH
600000	240	LF	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH
600000	190	LF	TYPE A CURB ANY HEIGHT OR DEPTH
655105	1260	SF	5 INCH CONCRETE SIDEWALK
655120	130	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
800000	1	EA	2-WIRE APS CENTRAL CONTROL UNIT
800000	3	EA	ADJUST HANDHOLE TO GRADE AND REPLACE FRAME AND COVER
800000	6	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	6	EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	1	EA	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	80	LF	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	105	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
800000	118	SF	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
800000	1	EA	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
802501	350	LF	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
861105	1190	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
861107	1220	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
			ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

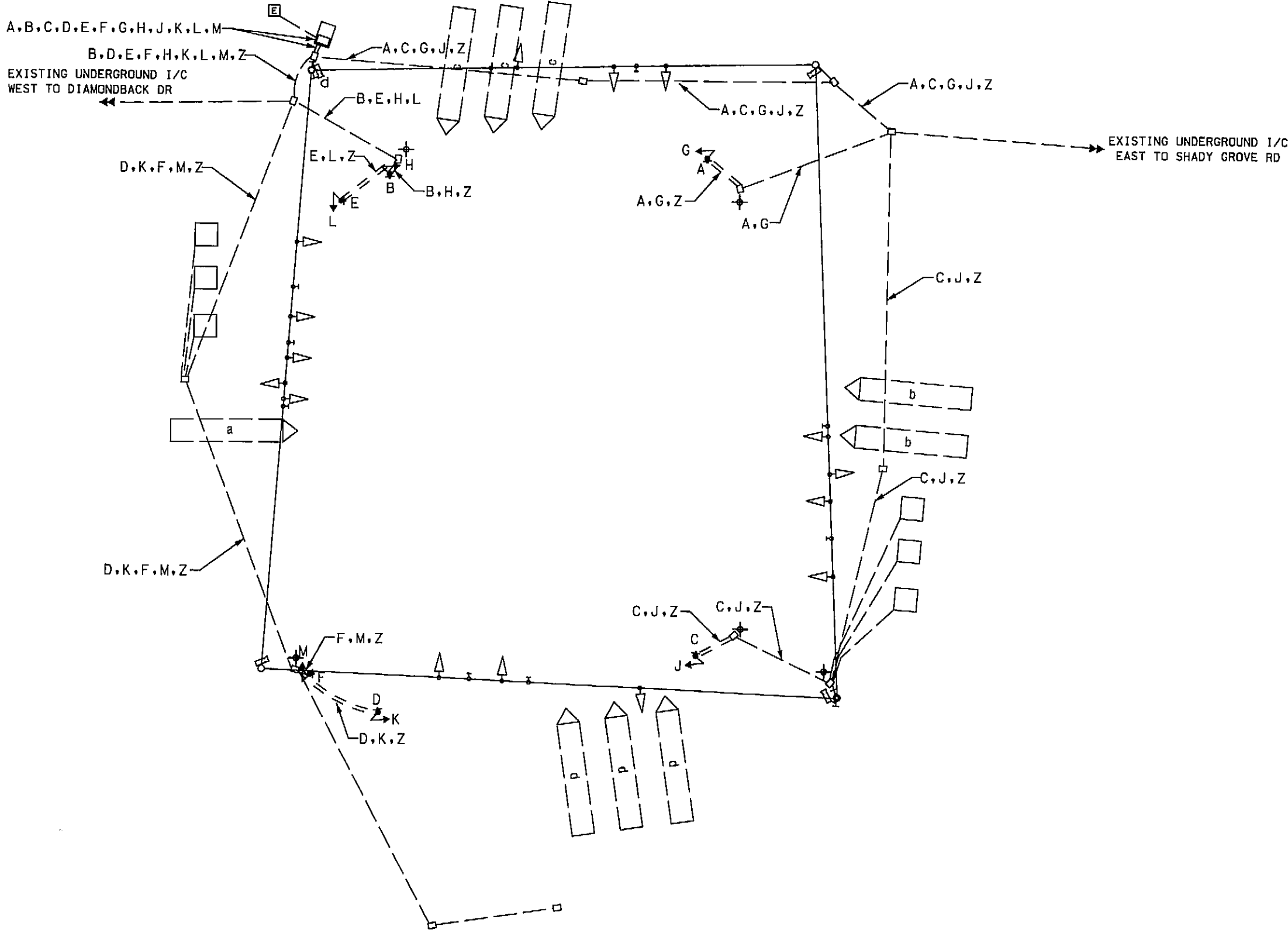
C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASING CHART

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
⬅	➡	⬅	➡	⬅	➡	⬅	➡	⬅	➡	⬅	➡	⬅	➡	⬅	➡	⬅	➡	⬅	➡	⬅
⬅	➡	⬅	➡	⬅	➡	⬅	➡	⬅	➡	⬅	➡	⬅	➡	⬅	➡	⬅	➡	⬅	➡	⬅

PHASE 1 & 5	+G-	+G-	R	R	+G-	+G-	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW
1 & 5 CHANGE	CONTROLLER MAY CHANGE TO PHASE 1 & 6 OR PHASE 2 & 6 OR PHASE 2 & 5.																			
PHASE 1 & 6	+R-	+R-	R	R	+G-	+G-	G	G	R	R	R	R	R	R	R	DW	DW	DW	DW	DW
1 & 6 CHANGE	+R-	+R-	R	R	+Y-	+Y-	+Y-	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW
PHASE 2 & 5	+G-	+G-	G	G	+R-	+R-	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW
2 & 5 CHANGE	+Y-	+Y-	Y	Y	+R-	+R-	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW
PHASE 2 & 6	+R-	+R-	G	G	+R-	+R-	G	G	R	R	R	R	R	R	R	WK	WK	WK	WK	DW
PED CLEAR	+R-	+R-	G	G	+R-	+R-	G	G	R	R	R	R	R	R	R	FLOW	FLOW	FLOW	FLOW	DW
2 & 6 CHANGE	+R-	+R-	Y	Y	+R-	+R-	Y	Y	R	R	R	R	R	R	R	DW	DW	DW	DW	DW
PHASE 4 & 8	+R-	+R-	R	R	+R-	+R-	R	R	G	G	G	G	G	G	G	DW	DW	DW	DW	DW
4 & 8 CHANGE	+R-	+R-	R	R	+R-	+R-	R	R	Y	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW
PHASE ALT. 4 & 8	+R-	+R-	R	R	+R-	+R-	R	R	G	G	G	G	G	G	G	DW	DW	DW	WK	WK
PED CLEAR	+R-	+R-	R	R	+R-	+R-	R	R	G	G	G	G	G	G	G	DW	DW	DW	FLOW	FLOW
ALT. 4 & 8 CHANGE	+R-	+R-	R	R	+R-	+R-	R	R	Y	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW
FLASHING OPERATION	FLAR	FLAR	FLY	FLY	FLAR	FLAR	FLY	FLY	FLR	FLR	FLR	FLR	FLR	FLR	FLR	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

A,B,C,D,E,F - ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
G,H,J,L,K,M - ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
Z - NO. 6 AWG STRANDED BARE COPPER GROUND WIRE.



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 28 (KEY WEST AVENUE) AT
OMEGA DRIVE/MEDICAL CENTER DRIVE
ROCKVILLE, MARYLAND

GENERAL INFORMATION SHEET

SCALE N.T.S. ADVERTISED DATE MARCH 2013 CONTRACT NO. XY1515185

DESIGNED BY AMH/JVB COUNTY MONTGOMERY
DRAWN BY JVB LOGMILE 15R02800.99
CHECKED BY JFL TMS NO. L735
F.A.P. NO. - TOD NO. -

TS NO.4057F GI DRAWING SG-3 OF 3 SHEET NO. 9 OF 24

